

To: Sorrenson - DNR, Allen[allen.sorenson@state.co.us]
From: Way, Steven
Sent: Thur 4/9/2015 9:05:16 PM
Subject: RE: FW: Golf Tunnel Bulkhead - Sample pipe / pressure gauge

How come you didn't invite me.....? Not that it would have mattered; I'm on Response Duty. Anyway, I had hoped to get there last year during construction.....oh well.

We may need to do some recon at the R n B / GK in May if possible (snow, etc). We need to look at the options for piping water downslope from GK to the R n B pond.

Enjoy !

From: Sorrenson - DNR, Allen [mailto:allen.sorenson@state.co.us]
Sent: Thursday, April 09, 2015 2:18 PM
To: Way, Steven
Subject: Re: FW: Golf Tunnel Bulkhead - Sample pipe / pressure gauge

Steve, we're good. There's a valve specified in by of the pressure gauge. See section 9.0 of the construction document. I'll be at the Golf Tunnel bulkhead tomorrow. -Allen

On Thu, Apr 9, 2015 at 1:33 PM, Way, Steven <way.steven@epa.gov> wrote:

Allen,

I assume that you have seen this communication. If we need to modify the spec, we can do that, but one way or the other let's discuss and prevent a repeat.

Steve

Steven Way

Federal On-Scene Coordinator

Emergency Response Unit

US EPA - Region 8

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From: Griswold, Hays

Sent: Monday, April 06, 2015 10:58 AM

To: jeff.graves@state.co.us; Bruce Stover; kmuenchow@fs.fed.us; Brian Lloyd

Cc: Way, Steven; Matt Francis

Subject: Re: Golf Tunnel Bulkhead

Dam! should have thought of that...

I think a good idea would be a controlled discharge from the main drain to draw down the mine pool during the peak of runoff to test that part of the system and see what dealing with that would be like as far as flow in the tunnel and surface flow outside and then when the pressure on the one inch is manageable correct that situation and any others that may crop up.

I would like to see what kind of issues that brings up for future reference...

Do not think it would hurt anything at this point and might teach us a few things...

ER has to come back up to do final cleanup anyway and we can do it then.

It would be good to know at this point how all parts of the system works before a final shut in so to speak...

Let me know if you would like to meet and discuss it...

Hays

From: Graves - DNR, Jeff <jeff.graves@state.co.us>
Sent: Monday, April 6, 2015 8:53 AM
To: Griswold, Hays; Bruce Stover; kmuenchow@fs.fed.us; Brian Lloyd
Subject: Golf Tunnel Bulkhead

Hays,

Bruce and I went up to the Golf Tunnel last Friday to try and modify the sampling pipe to allow more maintainability. I have been concerned that the existing pipe setup does not allow for the pressure gauge to be maintained since no valve was installed on the waterside. Inevitably, the pressure gauge will require servicing, but without a valve to take pressure off the gauge nothing can be done. Our hope was to outfit the line with a valve on the water side of the gauge before pressure on the bulkhead got too high, but that point has passed. The pressure has reached 200 psi making any installation of a new valve impossible since installation must be done on the 1" pipe discharging water at a velocity in excess of 150ft/sec.

In it's current configuration, the bulkhead does not have a 100 year design life. At some point the pressure gauge will fail (they always do), and the pipe will start leaking. At a pressure of 200 psi, a leak on the 1" sampling pipe could discharge nearly 1 cfs, which is obviously not a minor leak. As the pressure climbs the potential for a much bigger "leak" exists.

At this point I think the best option is to verify that the pressure transducer is accurately logging pressure, and then grout the 1" sampling pipe off. That eliminates any risk of the sampling pipe failing. Another, less satisfying, option would be to drain the mine pool down to a pressure that would allow installation of a valve on the waterside of the gauge. I'm not a real fan of that option, but it would give us a "do-over". I guess there might be some type of well field technology that

would allow the pipe to be cut-capped-rethreaded so that a valve could be installed, but I'm not familiar with it.

I will purchase the instrumentation to read and log pressure on the transducer to verify that we are getting accurate readings, but Harrison Western needs to install the correct wire to the portal so that data can be downloaded without having to go underground.

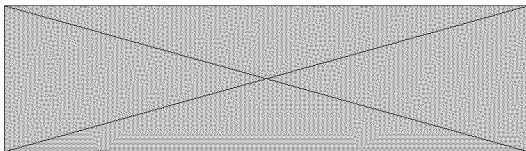
Not sure how you want to proceed. The longer we wait, the more difficult any remedy will be.

--

Jeff T. Graves

Senior Project Manager/Geological Engineer

Inactive Mine Reclamation Program



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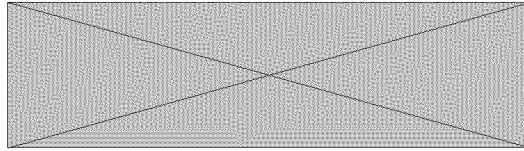
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